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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,661	10/07/2003	Heinrich Zitzmann	3193 DIV	4097
22474	7590	07/08/2005	EXAMINER	
DOUGHERTY, CLEMENTS, HOFER, BERNARD & WALKER 1901 ROXBOROUGH ROAD SUITE 300 CHARLOTTE, NC 28211			EASTHOM, KARL D	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/679,661	ZITZMANN, HEINRICH	
	Examiner	Art Unit	
	Karl D. Easthom	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Newly submitted claim 18 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: It is a method for forming a product and the product can be formed by a materially different method such as by applying an unfired ceramic or applying the connecting layer to the fired ceramic cover layer.

2. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 18 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friese et al. '007 in view of Tani et al., Murata et al., or Gerblinger et al. Friese discloses the claimed invention at Figs. 1 or 2 except the platinum film resistor 6 being thin film and the glass pastes. The thin film is met by the thick film paste of Friese, where thick or thin, in the context of applicant's arguments, are a matter of degree. Whether the covers are fired after or before the glaze does not create a distinct product where it is not clear how firing before or after applying the glaze creates a distinct product. As an alternative to this see below the rejection with Wienand. As an alternative to the thin films, where applicant argues that his claims are thin film, Tani

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discloses a platinum film resistor 14 that can be produced by thin or thick film techniques for use as a temperature sensor (sputtering or screen printing - col. 3, lines 49-52) such that it would have been obvious to employ either type of platinum film where both are known in the temperature sensor resistor arts. Murata at col. 4, lines 1-12 also discloses that the platinum temperature sensing film may be thin or thick for use as a temperature sensor in a multilayered sensor such as that of Friese. One would be motivated to interchange the two depending on the equipment and materials available, or the response desired. In Friese, the glaze layer 4 is the connecting layer, described as a frame, such that it is in the border area as a sealing frame, creating a void where the platinum sensor is located. The cover is the ceramic film 11, where the film 3" and frame 4' can be elongated, see col. 5, lines 35-40, or 3" is part of the ceramic cover 11. A glaze is a smooth, thin, shiny coating see Webster's New Riverside University Dictionary. Also, the YSZ¹ is a glass as an alternative. Or, in Gerblinger et al., the glass layer is used to connect a thin or thick film layer to a ceramic layer, see abstract, for the purpose of protecting the thin film platinum layer, so that it would have been obvious to employ the glaze layer and thin film resistor in the Friese et al. device (thus meeting claims 16-17 also). The frame of Friese is depicted as a hermetically sealing frame surrounding the resistor 6 in Fig. 2, and described as a frame, see col. 3, lines 53-60, col. 5, lines 21-52. The ceramic cover and ceramic substrate are either 3, or films 1 and 11. The additional layers meet claim 16. See col. 5, line 50-51, col. 4, lines 8-14. In claim 14, the ceramic substrate 4 is alumina. In claim 15, the cover layer 4' at

¹ See par. 43 of Keegan et al. US 2003/0077496, where YSZ is called a glass.

Fig. 2 is alumina. In claim 16, film 11 meets the claim as a cover layer and it is on the peripheral edges, as well as the remaining portions. The frame of Frieese creates the void. That is, the platinum sensor is within a void, that is, there must be space for the sensor

5. Claims 5 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frieese et al. '007 in view of Tani et al., Gerblinger, or Murata et al., as applied to claims above, and further in view of Wienand et al. The claimed invention is disclosed except the sealing glaze and sealing cover being of glass, and fired covers. For claim 5, assuming arguendo the word glaze is not met by the YSZ frame in Frieese, Wienand discloses high melting glass solder at col. 4, lines 3-11 for attaching ceramic plates together such that it would have been obvious to employ the material for attachment as a replacement for the attachment means of Frieese. Wienand also disclose an additional cover of glass 14 for added protection, where YSZ is called a glass (see par. 43 of Keegan et al., US 2003/0077496) such that it would have been obvious to employ that (claims 16-17) for that reason in the device of Frieese. Wienand also discloses ceramic plates attached by a glaze or glue at col. 4, lines 8-11, where the ceramic plate suggests one that is already fired, since it is attached at low temperatures of 500 degrees much below the normal firing temperatures of Frieese and other prior art of record employing lamination, so that same would have been obvious where Frieese et al. also discloses attaching ceramic plates by glass. As a further alternative to above for claims 16-17, Wienand discloses an additional cover of glass 14

for added protection such that it would have been obvious to employ that for that reason in the device of Friese '007.


5. Applicant's arguments filed 2/5/5 have been fully considered but they are not persuasive. With respect to Friese not disclosing fired covers before applying the glaze, this is not persuasive since this is a process distinction and it is not clear how this renders the product distinct. As to lack of motivation this is not correct. Murata and the art as noted discloses employing thin or thick films on ceramic green sheets for reasons noted, as those are virtually the only two types. Or, as to the fired cover layer, Wienand suggests attachment in the manner of applicant as noted above – at low temperatures way below a firing temperature of a ceramic.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D. Easthom whose telephone number is (571) 272-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom
Primary Examiner
Art Unit 2832

KDE